

Letter from Alexander Graham Bell to Mabel Hubbard Bell, May 12, 1908, with transcript

ALEXANDER GRAHAM BELL TO MABEL (Hubbard) BELL Hammondsport, New York.
Tuesday, May 12, 1908. Mrs. A. G. Bell, 1331 Connecticut Avenue, Washington, D. C. My darling Mabel:

Still waiting, waiting, waiting. A beautiful sunshiny day and no rain (in spite of weather predictions published in newspapers). High wind, however, prevented experiments with aerodrome No. 2 Baldwin's White wing.

We took advantage of the opportunity to fly tetrahedral kites (our No. 1, 2 and 3). We obtained some of the missing data before the kites were smashed. No 1 (usual form) seemed quite steady in spite of the violent wind which pulled out the keel stick. By the by — as showing the difficulties of kite flying here — the anemometer only registered a wind of about 9 miles an hour on the flying field, which was sheltered by a row of trees, while the wind was high enough above the level of the trees to tear our kites to pieces. This indicates that all our wind velocities (taken here on the ground) are unreliable. We cannot judge of the wind at the kite — by readings taken on the ground — here I mean.

Kite No. 2 flew pretty steadily, but I do not think it compared in steadiness with kite No. 1. The strangers present, Mr. Lyon and Mr. Post, expressed independently the same opinion without knowing mine — while those who expected it to be as steady as No. 1, Selfridge and Baldwin, found no difficulty in deciding that it was so! I suppose we must accept the point that there can not be much difference otherwise all would agree. I don't like to go to work, however, and build a big structure on the basis of No. 2 unless my own judgement agrees. We must decide soon so that the tetrahedral aerodrome may be commenced at Beinn Bhreagh. I think I shall stick to the known and not introduce new features unless I am perfectly satisfied from experimental evidence that they do not interfere with stability.

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Can't allow any doubt upon this point — for any error of conclusion, based upon small models will be multiplied in the larger structure. “Better let well enough alone” is a good motto. I have perfect confidence in the full construction as “well enough” — and though from many points of view the “empty” construction possesses advantages, I am unwilling to depart from the construction I know all about, while any uncertainty remains in my mind concerning the automatic stability of the empty construction. We can test the matter conclusively at Beinn Bhreagh by flying the old “Frost king” once more. The interior cells have been removed. The kite in this condition was tested just before we left Beinn Bhreagh and proved dangerously unstable in the air. This may have been due to improper loading. This could be settled by an experiment, but it would require my presence for I cannot trust the judgement of another in this matter.

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Kite No. 3 containing horizontal surfaces, was very unsteady in the air, excepting when flown by the bow line — indicating the undoubted advisability of trying an aerodrome having oblique surfaces alone — before resorting to any combination of horizontal surfaces to reduce the size of the structure. Automatic stability in the air is the unique feature of tetrahedral constructions and must not be departed from. Another unique feature is the ability to increase the size of the structure without materially adding to its flying weight — so that all we need is to increase the number of cells sufficiently to support the desired load and then apply motive power. The bug-a-boo of “increased head-resistance” should not prevent the experiment from being made. If we can't drive the structure through air at a supporting speed under its own motive power let us decide this point experimentally rather than by theoretical reasoning alone. We can try it — and at all events the kite won't come down . I have sufficient confidence in the structure to feel sure that it will fly as a kite carrying up man and engine and all even if the propeller does not push at all .

Mr. Bedwin turned up this morning and I was glad to receive your note — also a night shirt and clean under things. Don't know how to handle laundry matters here and expect I shall

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have to buy some clean things to come home in. Your box of Poland water bottles came just at the proper time for I had exhausted the Poland water supply of Hammondsport and the new supply ordered has not yet arrived. Mr. Lyon is staying over another day in the hope of witnessing an experiment with the 4 White-wing.

The birds are singing out of doors so I better say goodnight before the sun looks in at the window.

A letter from Elsie says that you are working too hard — and she thinks that your new editorial duties are proving too much for you. Remember that health is your first consideration. Don't do anything that Miss Gadell objects to. I am sure she likes you and wishes to do everything in her power to make you well. You poor little darling I wish I could do more to help you. I love you very much.

Your own, Alec.